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Influence of Mentat on Memory and Mental Fatigue in cases of Anxiety Neurosis and Depression

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ABSTRACT

Stress is known to cause abnormalities in behaviour leading to anxiety and depression. Stress is also known to cause impairment of memory. Ayurvedic texts describe many herbs which can improve memory. Mentat is a formulation of herbs based on Ayurvedic principles. The drug in the form of syrup was given to patients of anxiety neurosis and depression in a placebo controlled study. Memory was impaired and fatiguability increased in patients of anxiety neurosis and depression. Mentat caused improvement in memory and decrease in fatiguability in both groups. Placebo had no effect.

INTRODUCTION

Psychiatric disorders are increasing in modern times. Anisman¹ points strongly to contribution of stress to depressive illness. Canton and Frucon² noticed stressful events in the life of patients prior to onset of schizophrenia. Stress is also known to cause anxiety and failure of memory and easy fatiguability. Many Ayurvedic remedies are described in ancient literature which influence memory. Mentat is a formulation based on such information and prepared from plants according to processes described in Ayurvedic literature. It was therefore decided to study the effect of Mentat on memory and mental fatiguability in patients of anxiety neurosis and depression.

MATERIAL AND METHODS

Thirty patients of anxiety neurosis and 44 cases of minor depression were included in the study. The diagnosis was based on the results of Hamilton rating scale for anxiety and for depression. The subjects were divided into two by groups for administration of placebo or active drug by using random number table separately for patients of anxiety neurosis and patients of depression. None of the patients had received any treatment in the preceding two weeks. The memory quotient for short-term memory was determined according to the method described by Kling and Riggs.³ Mental fatiguability was determined by using standard letter cancellation test. The score consisted of missed letters plus wrong cancellations out of the total of 200 in a fixed period of time. After recording the predrug scores for memory and mental fatiguability the patient received either a placebo or Mentat according to the preassigned order. The dose was two tablets twice a day for 3 months. A bottle containing 80 tablets were given at a time. At the follow-up visit every two weeks the remaining tablets were counted to check the compliance. A quick clinical examination and interrogation was conducted to look for adverse reactions, if any. At the end of three weeks the tests for memory and fatiguability were conducted and the scores noted on the rating scale.

RESULTS

Table I shows the memory quotient for short-term memory in cases of mild anxiety neurosis and depression. The memory quotients in both these groups were significantly lower than in normal subjects of the same age group. Mentat treatment improves the memory quotient significantly in cases of anxiety neurosis and brings it to normal level. In case of depression the memory quotient is raised does not reach statistical significance. Mental fatiguability is also increased in both groups and treatment with Mentat reduces mental fatiguability in both groups significantly (Table II).

Table I: Showing the effect of treatment with placebo and Mentat on memory quotient
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in cases of anxiety neurosis and depression (Mean \pm SD)			
		Memory quotient	
	Treatment	Before treatment	After treatment
Anxiety neurosis (n=30)	Placebo	64.5 \pm 4.85	68.8 \pm 7.58
	Mentat	66.8 \pm 6.38	90.5 \pm 10.78*
Depression (n=44)	Placebo	58.5 \pm 10.35	60.6 \pm 8.35
	Mentat	60.7 \pm 8.50	70.6 \pm 9.85
Normal Laboratory mean		60.6 \pm 4.6	* p <0.05

Table II: Showing the effect of treatment with placebo and Mentat on mental fatiguability in cases of anxiety neurosis and depression (Mean \pm SD)			
		Memory fatiguability	
	Treatment	Before treatment	After treatment
Anxiety neurosis	Placebo	90.5 \pm 12.87	92.2 \pm 10.75
	Mentat	94.2 \pm 16.7	70.4 \pm 12.77*
Depression (n=44)	Placebo	94.5 \pm 12.85	90.3 \pm 10.78
	Mentat	86.3 \pm 14.87	70.77 \pm 12.85*
Normal Laboratory mean		54	* p <0.05

DISCUSSION

The study revealed impairment of memory and easy fatiguability in cases of anxiety neurosis and depression. This is to be expected. Treatment with Mentat for 3 months caused significant improvement in memory quotient in both anxiety neurosis and depression. The memory impairment was more in cases of depression and the beneficial effect of Mentat though significant was less in cases of depression compared to patients of anxiety neurosis. The neurological changes in depression are different from those in anxiety states.⁴ And, therefore, differences in drug effects are to be expected. Similar results are seen in case of mental fatiguability as judged by the scores of the letter cancellation test.

The anxiety rating scale scores and neuroticism index were only moderately revised in these and specific complaints regarding memory loss or mental fatiguability were not spontaneously reported. However, both groups showed significant impairment of short-term memory and increased fatiguability and mental treatment for 3 months caused significant improvement in both parameters. Placebo did not have any effect. Mentat, therefore, seems to have specific effect on memory and power of concentration and further studies to elucidate the mode of action are warranted.

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